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CLAIMS

1. A furnace for the manufacture of synthetic vitreous silica ingot, the furnace comprising: a furnace enclosure housing a refractory container, the container being adapted to hold a melt of synthetic vitreous silica; a die disposed within a wall or base of the container, the die including an orifice through which the glass ingot is extruded; moveable support means downstream of the orifice, adapted to support and facilitate withdrawal of the ingot; and one or more burners adapted to maintain the silica above its sintering temperature; characterised in that at least one burner is a synthesis burner, such burner(s) being provided with associated means for the supply of silica precursor and combustion gases and being adapted to deposit synthetic vitreous silica by vapour deposition on to the surface of the melt, the arrangement being such as to permit continuous withdrawal of silica as ingot at a rate substantially similar to that at which silica is deposited by the synthesis burner(s).

2. A furnace according to claim 1, wherein the moveable support means comprises an arrangement of moveable clamps.

3. A furnace according to claim 2, wherein the refractory container with its die, the ingot and the arrangement of clamps can be rotated synchronously to provide a deposited glass of improved homogeneity.

4. A furnace according to claim 2 or claim 3, wherein the refractory container with its die, the ingot and the arrangement of clamps can be moved to and fro horizontally to permit spreading of the pattern of deposited glass from the burner(s).

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5. A furnace according to claim 2 or claim 3 wherein the refractory container with its die, the ingot and the arrangement of clamps can be moved in orthogonally disposed x- and y- directions, to permit spreading of the pattern of deposited glass from the one or more burners.

6. A furnace according to claim 2 or claim 3, wherein spreading of the pattern of deposited silica is achieved by movement of the burner or burner array and/or of the refractory container.

7. A method of forming a shaped body of synthetic vitreous silica including the steps of: generating a melt of synthetic vitreous silica contained in a refractory container, part of the boundary of which defines a shaping orifice; maintaining the melt in a molten state by heating with one or more burners; and removing the generated synthetic vitreous silica through the orifice as a shaped ingot; characterised in that at least one burner is a synthesis burner, and the silica is deposited from such synthesis burner(s) in such a manner that synthetic vitreous silica can be deposited at a rate substantially similar to that at which silica is withdrawn as ingot through the shaping orifice.

8. A method according to claim 7, wherein the shaping orifice is located at the lowest part of the mass in the refractory container and the removal involves positively withdrawing the ingot from below.

9. A method according to claim 7 or claim 8, wherein the synthesis burner(s) serves to heat the surface of the melt so that the deposited silica sinters directly to glass.

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